

REMARKS**Drawings**

The Examiner objected to the drawings under 37 C.F.R. 1.83(a) as failing to show a memory controller as recited in claim 3 and the specification. Paragraph 0003 of the specification states that “[r]ecent generations of processor designs have integrated the memory controllers which facilitate communication between the processors and associated memory.” Figure 1 depicts a processor 104. A memory controller referenced by the specification and claim 3 is not explicitly depicted in Figure 1 because, as known to those skilled in the art and as referenced in the specification, the memory controller is an integrated component of the processor. This is explained in paragraph 0014, “[i]n this example, processor 104 includes a memory controller (not shown) to facilitate interaction with memory modules 106-109.” In view of the foregoing, Applicant believes that the drawings as filed include the proper level of detail as explained in MPEP § 608.02(d) and respectfully requests withdrawal of the objection.

Claims

Claims 1-37 and 39-41 are currently pending in this application. Independent claims 1, 18, 30, and dependent claims 2-17, 19-29, 31-37 and 39-41 were rejected under 35 U.S.C. 103(a) as being obvious over Agafstein et al. (U.S. Patent No. 6,594,556) in view of R. Wachel (U.S. Patent No. 6,608,761). Claims 39, 40, and 41 are renumbered, respectively, as claims 38, 39, and 40 to correct a discrepancy in numbering of the claims. The rejections are respectfully traversed.

Independent claim 1 describes an electronic assembly comprising a printed circuit board, a processor, a memory attached to the printed circuit board, a routing channel of conductors interconnecting the processor and the memory, and a regulator assembly. The regulator assembly comprises “a first connector mounted on the printed circuit board adjacent a first edge of the routing channel, a second connector mounted on the printed circuit board adjacent to a second edge of the routing channel opposite the first edge, the first and second connectors being coupled to the regulator and facilitating distribution of the power to the processor, the regulator

and first and second connectors forming a bridge across the routing channel." (Claim 1.) In order to establish a prima facie obviousness under 35 U.S.C. 103(a), "all of the claim limitations must be taught or suggested by the prior art." MPEP § 2143.03 (8th Edition, Revision 2). Applicant respectfully requests withdrawal of the rejection of claim 1 because, as discussed below, the combination of prior art cited by the Examiner does not teach or suggest all of the limitations in claim 1.

Agatstein describes "a detachable power regulating device which regulates power and voltages to predetermined levels" and that "interfaces the computer system through a socket connector." (Column 2, lines 50-53.) Figures 1 and 3 of Agatstein disclose a printed circuit board 340, a processor 350, memory 130 (Fig. 1), a bus 110 for transferring information (Fig. 1), and a regulator assembly 200 providing power to the processor. , However, Agatstein fails to disclose or suggest a connector that is located adjacent to a routing channel.

The Examiner pointed to Figure 1 of Agatstein as showing a connector that "is connected to traces in the motherboard which connect to system power supply adjacent the routing channel," (Office Action dated 4/28/2005, page 4). The Applicant respectfully disagrees with the Examiner's characterization of the reference. Agatstein's Figure 1 is a block diagram which clearly does not represent the physical characteristics of the depicted system or the physical interrelationships of the system elements shown. Agatstein does not disclose the placement of a first regulator connector located adjacent to a routing channel. Neither does Agatstein disclose a second connector mounted on the printed circuit board adjacent to a second edge of the routing channel opposite the first edge, or the combination of the first and second connectors and the regulator forming a bridge across the routing channel.

Wachel teaches a "method and apparatus for bridging between PCI segments in a system of CPCI components, without occupying a component slot, thus permitting a greater density of components in a CPCI chassis." (Column 2, lines 11-14.) The Examiner stated that "Wachel teaches a first connector mounted on the printed circuit board 32a (Fig. 2), and a second connector 32b mounted on the printed circuit board adjacent to the routing channel, the regulator and the first and second connectors forming a bridge 26 across the routing channel." The Applicant respectfully disagrees.

Wachel discloses a PCI bridge that is used to connect multiple PCI segments within a PCI chassis. (Column 1, lines 8-10). This PCI bridge acts as a conduit for carrying information, "the present invention may be used with either type [transparent or non-transparent] of bridge to connect individual PCI segments." (Columns 3, lines 42-43.) Although Wachel does describe a routing channel, the Wachel bridge is itself part of the routing channel.

In contrast, claim 1 of the present application recites that "the regulator and the first and second connectors" form "a bridge across the routing channel." Use of the term "bridging" in Wachel may have created some confusion on this point. That is, Wachel uses the term "bridging multiple PCI segments" to indicate that his invention *connects* multiple PCI segments with a routing channel contained within the "bridge" itself. Thus, because Wachel's bridge includes the routing channel, it cannot be characterized as forming a bridge *across* a routing channel.

Neither Agatstein, Wachel, nor the combination of Agatstein and Wachel teach or suggest a regulator and first and second connectors forming a bridge across a routing channel as recited in claim 1 of the present application. Therefore, Applicant submits that the rejection of independent claim 1 and its dependent claims over these references should be withdrawn.

Independent claims 18 and 30 both include limitations similar to those recited in claim 1. Claim 18 covers "a first connector mounted on the printed circuit board adjacent a first edge of the routing channel, and a second connector mounted on the printed circuit board adjacent a second edge of the routing channel opposite the first edge, the first and second connectors being coupled to the regulator and facilitating distribution of the power to at least one of the circuits, the regulator and the first and second connectors forming a bridge across the routing channel."

Claim 30 covers "a first connector mounted on the printed circuit board adjacent a first edge of the routing channel; and a second connector mounted on the printed circuit board adjacent a second edge of the routing channel opposite the first edge; wherein the first and second connectors are configured to be coupled to a regulator and facilitate distribution of power there from to at least one of the circuits, the first and second connectors also being configured to form a bridge across the routing channel with the regulator." In view of the foregoing discussion of Agatstein and Wachel in relation to claim 1, the rejection of claims 18 and 30 and the claims dependent on claims 18 and 30 is believed overcome for at least the reasons discussed.

In view of the foregoing, Applicants believe all rejections to the independent claims have been overcome thereby placing all independent and dependent claims now pending in this application in condition for allowance. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at the number provided below.

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP



Joseph M. Villeneuve
Reg. No. 37,460

P.O. Box 70250
Oakland, CA 94612-0250
(510) 663-1100